[redacted]

DDe-100

22 December 1954

Mr. Kelly Johnson
Chief Engineer
Lockheed Aircraft Corporation
California Division
Burbank, California

Dear Kelly:

In accordance with our telephone conversation of 20 December, I have obtained some preliminary information on the J-67 engine. This information is the latest estimate as of yesterday morning. However, Wright-Aero is in Washington talking with the development people today, and some of these numbers may be changed slightly. I must emphasize the intent and purpose of submitting information of this type. Although it is desirable to review various engine capabilities with future possibilities, there is no intention to jeopardize the concept of our present project. This data should be used for advanced planning information only, and should not delay our present time schedule on the existing project.

Derived from British Bristol Olympus. J67 is in larger size - 225 #/sec airflow vs. 175 for Olympus. A great deal of development, modification, and "Americanization" required.

Two spool, concentric shafts, high pressure ratio (10.5:1), annular combustion chamber, afterburner, variable area convergent-divergent nozzle.

Moderately high turbine inlet temp - 1500°F

Guaranteed ratings. Sea Level Static:

Condition	Thrust	SFC
Max (AB)	21500	2.05
Military	13200	.795
Normal	11700	.760

Altitude:

The spec states that both the absolute and operational altitude shall not be less than 65000 feet. The performance data is given to 65000 feet. However, since it is a high pressure ratio engine, it will probably operate at least at 70000 feet, probably to 75000 feet, not above.

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DX-100

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Development Status:

a. A total of 550 hours of running has been accumulated, on 6 or 7 engines at Wright Aero.
Has operated at 21900# with AB
14000#, AB not operating
(13200# guaranteed)

b. The engine is overweight, and will remain so. Spec weight is 5100# with AB, however, prototypes will be 5600-5800#, and 150 hour engines will be 5400#.

c. Difficulties have been encountered in: turbine blade failures (turbine vibration), unequal temperature distribution in turbine, low pressure compressor stall and surge.

d. Schedule:

Complete	Wright Est	WADC Est
50-hour test	Feb-June 1955	Aug 1955
150-hour test	Oct 1955-Feb 1956	Aug 1956
Production		Late 1956

Contractural Status:

a. Twenty prototype XJ67-W-1 engines are contracted for. For these [redacted] has been obligated.

b. A production program for 1000 engines with deliveries starting in late 1956 has been planned. This involves a peak rate of 135 engines per month.

Growth:

Proposals have been made by Wright for growth of the engine to 24000# thrust with AB, 15200# military.

For your information I have made arrangements for special mail handling. Hereafter please send all mail to the following address:

Colonel C. J. Ritland
c/o Room 4E1064
The Pentagon
Washington 25, D. C.

[redacted]

[redacted]

This is the final change with regard to our correspondence channels.

Sincerely,

O. J. KITLAND
Colonel, USAF

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